AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (Previously Presented) A data processing apparatus for processing inputted 3-dimensional form data of an object, said data processing apparatus comprising:

a modifying unit which modifies a form of a part of the inputted 3-dimensional form data with maintaining a form of other parts thereof based on 2-dimensional image data of the object.

2. (Previously Presented) The data processing apparatus of claim 1, further comprising:

a first generating unit which generates the 2-dimensional image data of the object;

a second generating unit which generates the 3-dimensional form data of the object independent of the 2-dimensional image data generated by the first generating unit; and

means for inputting the 2-dimensional image data and the 3-dimensional form data of the object to the data processing apparatus.

3. (Previously Presented) The data processing apparatus of claim 1, wherein said modifying unit extracts an area from the 2-dimensional image data based on a predetermined condition, and modifies the form of the part of the 3-dimensional form data corresponding to the area.

4. (Original) The data processing apparatus of claim 3, wherein the object is a head of a human.

5. (Original) The data processing apparatus of claim 4, wherein the area corresponds to at least one of hair, a forehead, eyebrows, eyes, irises of eyes, and lips of the human.

6. (Previously Presented) The data processing apparatus of claim 1 wherein

said modifying unit extracts a first area from the 2-dimensional image data based on a first predetermined condition and a second area from the 3-dimensional form data based on a second predetermined condition, and

said modifying unit modifies the form of the part of the 3-dimensional form data corresponding to the first area and the form of the part of the 3-dimensional form data corresponding to the second area.

7. (Original) The data processing apparatus of claim 6, wherein the object is a head of a human.

8. (Original) The data processing apparatus of claim 7, wherein the first area corresponds to at least one of eyebrows, eyes, irises of eyes, and lips of the human, and the second area corresponds to at least one of a nose and a neck of the human.

9. (Original) The data processing apparatus of claim 6, wherein for extracting the first area, area division is carried out for a shade portion of the object by referring to the 2-dimensional image data of a surrounding portion.

10. (Original) The data processing apparatus of claim 1, wherein the object is a head of a human, and the part corresponds to at least one of hair, a forehead, eyes, irises of eyes, a nose, cheeks, lips, and a neck of the human.

11. (Previously Presented) The data processing apparatus of claim 10, wherein said modifying unit modifies the form of the part of the 3-dimensional form data to emphasize a portion of the object corresponding to the part.

12. (Previously Presented) The data processing apparatus of claim 10, wherein said modifying unit modifies the form of the part of the 3-dimensional form data to smooth a portion of the object corresponding to the part.

13. (Previously Presented) The data processing apparatus of claim 1, wherein said modifying unit modifies the form of the part of the 3-dimensional form data in the case where the data processing apparatus is set in a specific mode.

14. (Previously Presented) A method for processing 3-dimensional form data of an object, said method comprising the steps of:

(a) inputting 2-dimensional image data of the object and the 3-dimensional form data of the object, the 3-dimensional form data and the 2-dimensional image data being independent of each other; and

(b) modifying a form of a part of the 3-dimensional form data with maintaining a form of other parts thereof based on 2-dimensional image data of the object.

15. (Original) The method of claim 14, the steps (b) comprising the steps of:

(b-1) extracting an area from the 2-dimensional image data based on a predetermined condition; and

(b-2) modifying the part of the 3-dimensional form data corresponding to the area.

16. (Original) The method of claim 15, wherein the area corresponds to at least one of hair, a forehead, eyebrows, eyes, irises of eyes, and lips of a human as the object.

17. (Original) The method of claim 14, wherein the step (b) comprising the steps of:

(b-1) extracting a first area from the 2-dimensional image data based on a first predetermined condition;

(b-2) extracting a second area from the 3-dimensional form data based on a second predetermined condition; and

(b-3) modifying parts of the 3-dimensional form data corresponding to the first and second areas.

18. (Original) The method of claim 17, wherein the first area corresponds to at least one of eyebrows, eyes, irises of eyes, and lips of a human as the object, and the second area corresponds to at least one of a nose and a neck of the human.

19. (Original) The method of claim 14, wherein a partial form of the object corresponding to the part is emphasized in the step (b).

20. (Original) The method of claim 14, wherein a partial form of the object corresponding to the part is smoothed in the step (b).

Claims 21 - 25 (Cancelled)

26. (Previously Presented) A 3-dimensional data processing apparatus for carrying out data processing with respect to a specified portion in a 3-dimensional form model of an object, said data processing apparatus comprising:

an obtaining portion for obtaining a distance image expressing distance information of the object by intensity; and

a processing portion for dividing the obtained distance image into segments, determining if each of the segments corresponds to the specified portion in accordance with spatial frequency of the distance image within each of the divided segment and carrying out predetermined data processing with respect to each of the segments determined to correspond to the specified portion.

27. (Previously Presented) The 3-dimensional data processing apparatus of claim 26, further comprising:

a measuring portion for measuring a 3-dimensional form of the object to generate 3-dimensional form data of the object, wherein

said obtaining portion obtains a distance image by generating the distance image based on the measured 3-dimensional form data.

28. (Original) The data processing apparatus of claim 26, wherein said controller further executes the step of:

(c) modifying a part of the 3-dimensional form data corresponding to the area.

Claims 29 - 35 (Cancelled)

36. (Previously Presented) A 3-dimensional form data processing apparatus for producing a model, said processing apparatus comprising:

a first extracting portion for extracting a first classified characteristic area satisfying a first predetermined condition from a 2-dimensional image obtained by photographing an object,

a second extracting portion for extracting a second classified characteristic area satisfying a second predetermined condition from a distance image obtained by 3-dimensional measurement with respect to the object; and

a processing portion for carrying out data modification for modifying a part corresponding to the extracted first classified characteristic area and a part corresponding to the

extracted second classified characteristic area with respect to a form model of the object obtained by the 3-dimensional measurement.

Claims 37 - 39 (Cancelled)